

What is claimed is:

1. A projection zoom lens having an optical axis comprising:

a first lens group having a negative refracting power and disposed at a front end on the side of a screen;

a second lens group having a positive refracting power disposed behind the first lens group;

a third lens group having a negative refractive power and disposed behind the second lens group;

a fourth lens group having a positive refracting power and disposed behind the third lens group; and

a fifth lens group having a positive refracting power and disposed behind the fourth lens group at a back end on the side of an object point;

wherein the fifth lens group is kept stationary, and the first, the second, the third and the fourth lens group are shifted along the optical axis in increasing magnification,

the first lens group includes a single meniscus lens having a convex surface facing the screen and an aspherical surface facing the object point,

the second lens group includes a single second-group lens having a convex surface facing the screen,

the third lens group includes a compound lens having a biconcave third-group first lens having a negative refracting power, and a biconvex third-group second lens having an aspherical surface facing the object point, having a positive refracting power and cemented to the back surface on the side of the object point of the third-group first lens,

the fourth lens group includes a single fourth-group lens having a positive refracting power and having a convex surface facing the object point, and

the fifth lens group includes a single biconvex fifth-group lens having a positive refracting power.

2. The projection zoom lens according to claim 1, wherein the first to the fifth lens group comprises six lenses virtually.

3. The projection zoom lens according to claim 1, wherein the first, the second, the third and the fourth lens group are shifted toward the screen on the optical axis in increasing magnification.

4. An optical projector comprising:  
an image forming means for producing images; and  
the projection zoom lens according to any one of claims 1 to 3 through which an image produced by the image forming means is projected.